Influenza surveillance summary for week 20 ending May 21, 2016

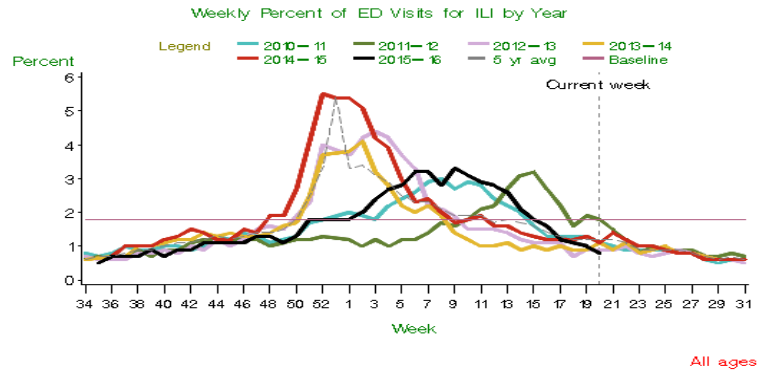
Public Health
Seattle & King County

As of 5/20/2016, influenza activity had returned to baseline levels for two consecutive weeks in King County. The 2015-16 influenza season was milder than the past three flu seasons, with fewer reported laboratory-confirmed influenza deaths and fewer influenza outbreaks in long-term care facilities (LTCFs) than were reported in the previous flu year. As defined by rises from baseline across multiple influenza activity indicators, the onset of the 2015-16 season occurred in the first week of January 2016. Peak influenza activity based on emergency department (ED) influenza-like illness (ILI) and laboratory reporting occurred from mid-February 2016 though March, which was later than the past two influenza seasons. This season saw fairly even numbers of influenza A (primarily H1N1) and B; the 2014-15 and 2013-14 influenza seasons showed a predominance of influenza A (H3N2) and influenza A (H1N1), respectively.
Because most persons with severe influenza-related illness are not tested for influenza, routine surveillance data is most useful for tracking trends and unusual disease patterns and not as an indicator of the total number of influenza-related deaths or influenza infections. Special studies are done in representative communities nationally to determine hospitalization and death rates from influenza.

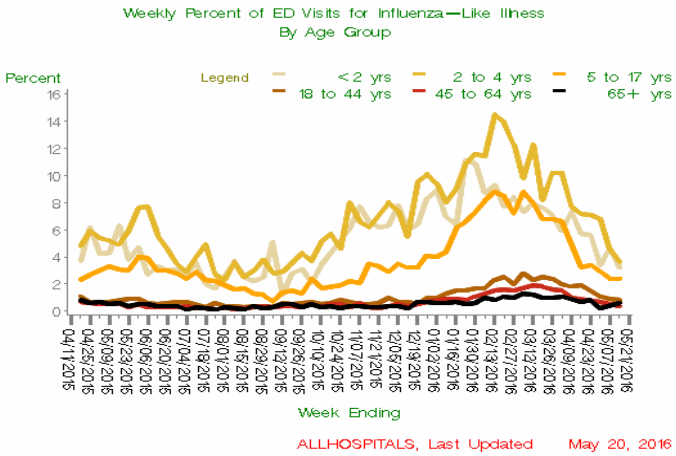
- **Influenza deaths**: A total of 16 laboratory-confirmed influenza-related deaths have been reported in King County; this is lower than in the past three seasons, where number of deaths reported has ranged from 22 to 43. Forty-four percent of cases were male, and 50% were under age 65 (range: 32 – 95 years, median: 66 years); no pediatric deaths were reported. Over one-third were attributable to influenza B, which is unusual. Six deaths were attributable to influenza A (H1N1), one to influenza H3, and three to influenza A (untyped). All but one had contributing underlying conditions, half of which were severe. Sixty-three percent had no evidence of influenza vaccine for this season. Estimates have indicated that between 65-256 influenza deaths are likely to occur in King County each flu season, but many go undiagnosed or unreported; during the 2014-15 flu season, it is likely that total influenza-attributable deaths were at the middle of this range.

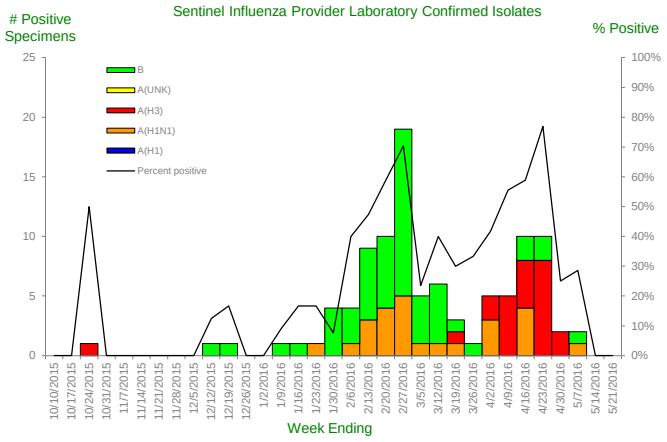
- **Outbreaks in long-term care facilities (LTCF)**: Sixteen outbreaks were reported from 15 LTCFs, all of which identified at least one laboratory-confirmed case of influenza. This was mid-range compared to the past five flu seasons, where number of LTCF outbreaks reported has ranged from six to 65. Three LTCF outbreaks resulted in one or more deaths. Nine facilities (56%) reported outbreaks attributable to influenza A and 7 (44%) to influenza B.
- **Laboratory:** King County Public Health Laboratory tested a total of 268 specimens contributed by sentinel influenza providers, 38% of which were positive for influenza. Of the 101 positive specimens, 25 (25%) were typed as A (H1N1), 23 (23%) were A (H3), and 53 (52%) were influenza B.
- **Syndromic surveillance**: The peak volume of ED visits for ILI was approximately 3.3%, lower than peak levels in the last three influenza seasons. Peak activity occurred during the end of February 2016. ED volume was highest among pediatric age groups with peak visit levels at approximately 14% among children aged two to four years old and 11% among infants under two years old.
- **Influenza vaccine effectiveness**: The National Vaccine Effectiveness (VE) Network estimate (data through February 12, 2016) for influenza A H1N1 viruses was 51% (95% CI: 25%-69%), and for influenza B was 76% (95% CI: 59%-86%). Across all strains, the combined vaccine effectiveness is estimated at 59% (95% CI: 44%-70%).

	Data for this week	Cumulative data this season since October 4, 2015
	0	16
King County Outpatient Sentinel Influenza Providers		
Specimens Submitted	8	276
Proportion Positive for Influenza	0.0%	Season Peak: 76.9%
A (H1)	0	25
A (H3)	0	23
A (Unknown)	0	0
B	0	53
Hospital Laboratory Influenza Rapid Antigen Test Submissions		
Number of Labs Reporting	0	Weekly Average: 3
Number of Specimens Submitted	0	Weekly Average: 185
Proportion of Tests Positive for Influenza	No labs reporting	Season Peak: 29.4%
Hospital Emergency Department (ED) Visits for Influenza-like Illness (ILI)		
Proportion of Visits Due to ILI	0.8%	Season Peak: 3.3%
Respiratory Disease Outbreaks at Long-Term Care Facilities (LCTFs)	0	16
Laboratory-Confirmed LTCF Influenza Outbreaks	0	16



Note: The change from ICD–9 to ICD–10 codes in October 2015 may impact trends.
Last updated May 22, 2016 ; 'current week' is week ending May 21, 2016
Baseline: Mean % ILI during non–flu weeks for previous three seasons, adding two standard deviations.
Using rapid antigen data, a non–flu week is a period of 2+ consecutive weeks where each one accounted for <2% of the season's total number of specimens that tested positive for influenza.





Resources

Additional Flu Information, Resources and Surveillance:
www.kingcounty.gov/health/flu

UW Virology Laboratory Respiratory Virus Surveillance:
http://depts.washington.edu/rspvirus/documents/VD2015-16.pdf

Washington State Influenza Surveillance Update:
http://www.doh.wa.gov/Portals/1/Documents/5100/420-100-FluUpdate.pdf

National Influenza Update:
www.cdc.gov/flu/weekly/

Global Influenza Update:
www.who.int/csr/disease/influenza/en/

^Influenza-like illness is defined as fever and cough *or* sore throat, or specific mention of influenza in chief complaint or discharge diagnosis